APPENDIX

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THE MARC SERIALS DISTRIBUTION SERVICE

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In June 1973, the Library of Congress distributed the first tape of MARC serial records to subscribers. This event marked a milestone in serials automation: for the first time, full machine-readable information on serials was available from a central source, providing standard cataloging data in a standard communications format.

MARC serial records are descended from two parent programs. In 1967, the three national libraries initiated the Serials Data Program (SDP) aimed at the creation of a national inventory of serials in machine-readable form. LC was designated executive agent for the first phase, which had as its objective the definition of data elements required for the identification and control of serials and the development of a standard format for the representation and communication of these elements in machine-readable form. After development of a comprehensive set of all data elements associated with serials description and control, a user survey was conducted to elicit opinion on these data elements and to determine user requirements for products and services from machine-readable serial records. Those data elements required by users were incorporated into the format.

Concurrently, LC was revising and augmenting the MARC book format as a result of response to the MARC Pilot Project, and efforts were underway to establish a standard communications format for the exchange of bibliographic data in machine-readable form. The MARC communications format structure subsequently became both an American National Standards Institute (ANSI) [1] standard and an International Organization for Standardization (ISO) [2] standard for the interchange of bibliographic data in machine-readable form. This format structure and the associated content designation scheme for books were adopted by the American Library Association and subsequently by many other organizations. The content designators for other forms of material were developed in collaboration with organizations interested in those forms.

A major conclusion of the SDP was that the sharing of machine-readable information on serials could be achieved only through adherence to standards for both the bibliographic data and its representation in machine form. The data elements designated by the SDP as required for serials were therefore put into the MARC communications format and published by LC's Information Systems Office in 1970 as the second in the series of MARC formats.[3]

In May 1971, LC began converting the serials in its Main Reading Room and Science Reading Room collections as part of a project to produce book catalogs of these two collections for the Reference Department.[4] This project provided a testing facility for the MARC serials format as well as experience with the problems of conversion of records for serials previously cataloged, that is, retrospective conversion. An addendum to the serials format, issued by the MARC Development Office in 1971, reflected changes made as a result of this undertaking.[5] Approximately 3,000 titles were converted for the two reading room projects.

Although it was considered desirable to convert retrospectively the records for at least those serials still being published, it was nevertheless thought illogical to convert older records while allowing new titles to be added to the backlog. Therefore, as the reading room conversion project approached completion, it was felt that the most effective use of an already experienced serials conversion staff would be an on-going conversion of serial titles currently being cataloged for LC, for the dual purpose of external distribution and internal use.

To determine the extent of interest in a serials distribution service, a questionnaire was sent to all subscribers to MARC records for books for 1971 and 1972, as well as to a selection of participants in the SDP user survey and to other organizations thought to be interested in machine-readable serial records. There were 75 responses to the 104 questionnaires sent; 53 of the 75 expressed definite interest in a MARC serials distribution service, three approved the idea but were not yet ready to subscribe, three applauded the prospect as Ohio College Library Center participants, and one anticipated using MARC serials data through a proposed network. Of the 53 expressing definite interest, 26 preferred a monthly, 19 preferred a weekly, and six preferred a quarterly service. Two did not specify a preference.

Thus assured of the interest of the library community in such a service, LC began on February 1, 1973, to create MARC records for all newly cataloged serials in roman alphabet languages that received printed card cataloging. Records for recataloged serials were also included. Excluded were those serials that were retained only for a limited time or for which permanent catalog records were not created for other reasons.

Actual distribution to subscribers began during the last week of June 1973 with a tape of 342 records. Subsequent tapes have been distributed every four weeks. The data base now contains 5,055 records, including those distributed at the end of February 1974. An annual figure of 8,000 to 10,000 records is anticipated for the future.

The questionnaire also sought to determine the amount of interest in romanized records in machine-readable form for serials in non-roman alphabet languages. Most of the respondents expressed a desire for the romanization of non-roman alphabet records and their inclusion in the distribution service as soon as possible. Accordingly LC began romanizing its records for serials in all non-roman alphabet languages on September 1, 1973, and these records are now being distributed as part of the regular service.[6] It should be understood that records for these titles will continue to be printed in the vernacular on LC printed cards as well as in the *National Union Catalog.*

By the end of February 1974, there were 22 subscribers to the serial tapes. The price of the annual subscription, April through March, is $400, and a test tape of selected records from the first monthly tape is available at $20 for those wishing to experiment before subscribing. Subscriptions, test tapes, and further information concerning subscriptions is available from the Card Division, Library of Congress, Building 159, Navy Yard Annex, Washington, D.C. 20541.

A second edition of the MARC serials format (now in press) incorporates the previous edition and addendum with a few additional changes, principally the use of the LC card number for the record control number and the addition of Tag 222 for key title. It was originally expected that the ANSI standard serial code would be used as the control number, but delegation of responsibility for assigning the International Standard Serial Number (ISSN) to the International Serial Data System (ISDS) through its national centers made it impossible to have this code available for all records distributed by LC at the time it would be needed as a control number. Therefore the LC card number was adopted for the MARC serials control number, consistent with MARC records for books and films. The ISSN, when known, is given in Tag 022. Tag 222 was added to the format to accommodate the key title, which must be associated with the ISSN in accordance with the ISO standard.[7] Preprints of the second edition of the format,[8] without index, have been distributed to subscribers to the distribution service and to purchasers of the test tape. Availability of the published format will be announced in the *Library of Congress Information Bulletin.*

MARC serial records are produced to serve LC's own requirements and in fulfillment of LC's responsibility to provide standard bibliographic records to the library and information communities. The MARC records for newly cataloged serials will be used internally to produce LC's printed catalog cards on the Card Division's Videocomp. The printed card production will provide multiple internal and external services, for examples, cards for LC's own catalogs, for depository sets, and for card and proofsheet sales, as well as for the composition of LC's book catalogs. MARC serial records are currently being used for searching via the MARC Retriever. For the future, the production of *New Serial Titles* from machine records is under consideration and, as the data base grows, the feasibility of automating serials check-in and other control functions will be investigated.

The MARC serials service provides a record which can serve many purposes. The record includes the majority of those data elements that pertain universally to the serial; users need add only local information for their own processing. Furthermore, elements of the record desired by a user for any given purpose may readily be selected from the complete record.

The record follows bibliographic standards which conform to those used by the majority of libraries in the United States, Canada, and Great Britain, namely the *Anglo-American Cataloging Rules* (AACR), LC subject headings, and both LC and Dewey Decimal classifications. Thus it agrees with the majority of manual records already in existence in library catalogs and is consistent with both manual and machine records for books and other forms of material. In addition, the record is compatible with the MARC records for books and other forms of material not only in the structure of the record but also in the general scheme of content designators (tags, indicators, and subfield codes). This allows the records for different materials to be processed using the same computer software and to be intermixed in machine files or computer-

produced publications if so desired.

Not all data elements identified in the MARC serials format are presently provided in distribution service records. Elements not provided are designated by an asterisk in the printed format. These elements are not currently available from the LC cataloging process, of which the MARC record is a direct product. All standard elements of an LC catalog record are provided, however, plus many that are not available on the catalog card or book catalog records, such as key title, geographic area code, subscription address, and price.

The collection of data for the MARC record involves many people supplying data at various points in the process, similar to an assembly line operation. Issues of serial titles not already in the Serial Record Division files are selected or rejected for LC's collections. If selected, the title is immediately processed through the cataloging cycle, since the descriptive cataloging process provides the basis for the Serial Record file entry for the accessioning, or checking in of future issues.

A specially designed MARC serials worksheet is used for collecting all data on a new serial title. Catalogers add the descriptive and subject information and provide the codes for a number of fixed field data elements. NSDP adds the ISSN and key title to the same worksheet. The MARC editor supplies the content designators, which will identify all information on the worksheet in the machine record, and completes the coding of the fixed field elements. Information on the worksheet is keyboarded using the MT/ST input device and the data is processed through the MARC production system. The computer programs used are the same as those used for the creation of records for other forms of material, except that format recognition programs have been developed only for books.

Other activities have been taking place concurrently with the development of the MARC serials service. The necessity for standards and adherence to them and the need for coordination and quality control of conversion projects so that the results will be a data base of use to all concerned are now widely recognized. The International Standard Bibliographic Description for Serials (ISBD-S), about to be published by the International Federation of Library Associations,[9] and the ISDS [10] both attest to the international interest in standard serial records. The ISBD-S defines the data elements necessary for the description of a serial, assigns an order to these elements in the entry, and prescribes punctuation to identify these elements. It is designed for the use of national bibliographies and libraries. The ISDS, organized within UNISIST, has the responsibility for assigning the ISSN and associated key title and developing an international data base of serial records consisting of those elements deemed essential to the identification of a serial. The ISDS works through national centers (NSDP in the United States) with an international center in Paris. There has been coordination in the development of the ISBD-S and the ISDS.

Concern over the need for a data base of serial records in a standard format and following similar bibliographic practices was indicated in the recent survey of serials data bases made by the Association of Research Libraries Ad Hoc Committee on Machine-Based Serial Records and in the work of the Ad Hoc Discussion Group on Serials Data Bases.[11] The zeal of the latter group has resulted in the establishment of the CONSER Project,[12] to be managed initially by the Council on Library Resources, Inc. The aim of the project is to develop a national serials data base through the cooperative efforts of the Library of Congress, the National Library of Medicine, the National Agricultural Library, the National Library of Canada, NSDP, and other participants working initially through the Ohio College Library Center.

A second significant step toward a comprehensive national serials data base is thus underway. As part of its participation in the CONSER Project, LC will contribute the machine records for its newly cataloged serials and will continue the distribution service. Coverage is expected to be augmented at some point in the future by the addition of records for titles reported manually to *New Serial Titles.*

The MARC serials service currently provides to its subscribers the ISDS elements of key title and ISSN, when available, along with standard LC cataloging data created according to AACR—the accepted cataloging rules of the American, Canadian, and British library associations. Abandonment of the LC practice of superimposition of entries established under ALA rules is being favorably considered by the Library of Congress. If put into effect, this would of course be reflected in the MARC records. When the ISBD-S is accepted by ALA and incorporated into AACR, it too will be put into practice by LC and reflected in MARC. MARC records for serials, as for books and other forms of material now included among the MARC distribution services, will continue to reflect developing standards as they are adopted by ALA for use by American libraries.

Footnotes begin on next page.

[1] American National Standards Institute. *American National Standard for Bibliographic Information Interchange on Magnetic Tape.* (ANSI Z39.2-1971) New York, 1971. 34 p.

[2] International Organization for Standardization. *Documentation–Format for Bibliographic Information Interchange on Magnetic Tape.* (ISO 2709-1973 (E)) 4 p.

[3] U.S. Library of Congress. Information Systems Office. *Serials: A MARC Format.* Preliminary ed. Washington, Library of Congress, 1970. 72 p.

[4] Avram, Henriette D., Lenore S. Maruyama, and John C. Rather. "Automation Activities in the Processing Department of the Library of Congress," *Library Resources and Technical Services.* Vol. 16, No. 2, Spring 1972. pp. 195-239.

[5] U.S. Library of Congress. MARC Development Office. *Serials: A MARC Format, Addendum no. 1.* June 1971. 31 p.

[6] Non-roman alphabets normally cataloged at the Library of Congress include Arabic, Armenian, Assamese, Bengali, Bulgarian, Burmese, Chinese, Greek, Gujarati, Hebrew, Hindi, Japanese, Kannada, Korean, Malayalam, Marathi, Nepali, Pali, Panjabi, Persian, Pushto, Russian, Sanskrit, Serbian, Sindhi, Singhalese, Tamil, Telegu, Thai, Tibetan, Ukrainian, Urdu, and Yiddish.

[7] International Organization for Standardization. *Documentation–International Standard Serial Numbering (ISSN).* (ISO/DIS 3297) 1973. 5 p.

[8] U.S. Library of Congress. MARC Development Office. *Serials: A MARC Format.* Second ed. Pre-print ed. 1973. 99 p. (Published edition in press.)

[9] International Federation of Library Associations. *I.S.B.D.(S): International Standard Bibliographic Description for Serials.* (Draft.) Paris, 1973. Unpaged. (Final version in press.)

[10] UNISIST International Serials Data System (ISDS). *Guidelines for ISDS.* Paris, United Nations Educational, Scientific and Cultural Organization, 1973. 58 p.

[11] Anable, Richard. "The Ad Hoc Discussion Group on Serials Data Bases: Its History, Current Position, and Future, "*Journal of Library Automation.* Vol. 6, No. 4, December 1973. pp. 207-214.

[12] Livingston, Lawrence G. "A Composite Effort to Build an On-line National Serials Data Base," *Library of Congress Information Bulletin.* Vol. 33, No. 5, February 1, 1974. pp. A35-A38.